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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/061,151	02/04/2002	Manfred Schwartz	218469US0	9170

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EXAMINER	
TSOY, ELENA	

ART UNIT	PAPER NUMBER
1762	

DATE MAILED: 06/02/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/061,151	SCHWARTZ ET AL.	
	Examiner	Art Unit	
	Elena Tsoy	1762	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *04 February 2002* .

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-15* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-15* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) *3,6* .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

Specification

The following guidelines illustrate the preferred layout for the specification of a utility application. These guidelines are suggested for the applicant's use.

Arrangement of the Specification

As provided in 37 CFR 1.77(b), the specification of a utility application should include the following sections in order. Each of the lettered items should appear in upper case, without underlining or bold type, as a section heading. If no text follows the section heading, the phrase "Not Applicable" should follow the section heading:

(a) TITLE OF THE INVENTION.
(b) CROSS-REFERENCE TO RELATED APPLICATIONS.
(c) STATEMENT REGARDING FEDERALLY SPONSORED RESEARCH OR DEVELOPMENT.
(d) INCORPORATION-BY-REFERENCE OF MATERIAL SUBMITTED ON A COMPACT DISC (See 37 CFR 1.52(e)(5) and MPEP 608.05. Computer program listings (37 CFR 1.96(c)), "Sequence Listings" (37 CFR 1.821(c)), and tables having more than 50 pages of text are permitted to be submitted on compact discs.) or
REFERENCE TO A "MICROFICHE APPENDIX" (See MPEP § 608.05(a). "Microfiche Appendices" were accepted by the Office until March 1, 2001.)
(e) BACKGROUND OF THE INVENTION.
(1) Field of the Invention.
(2) Description of Related Art including information disclosed under 37 CFR 1.97 and 1.98.
(f) BRIEF SUMMARY OF THE INVENTION.
(g) BRIEF DESCRIPTION OF THE SEVERAL VIEWS OF THE DRAWING(S).
(h) DETAILED DESCRIPTION OF THE INVENTION.
(i) CLAIM OR CLAIMS (commencing on a separate sheet).
(j) ABSTRACT OF THE DISCLOSURE (commencing on a separate sheet).
(k) SEQUENCE LISTING (See MPEP § 2424 and 37 CFR 1.821-1.825. A "Sequence Listing" is required on paper if the application discloses a nucleotide or amino acid sequence as defined in 37 CFR 1.821(a) and if the required "Sequence Listing" is not submitted as an electronic document on compact disc).

1. The disclosure is objected to because of the following informalities: examples of salts given on page 8, lines 21-42, page 9, lines 11-16, include oxides and hydroxides, which are **not salts**. Appropriate correction is required.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. **Claims 1-9, 11-15** are rejected under 35 U.S.C. 103(a) as being unpatentable over Dattilo (US 6,291,018) and incorporated by reference McMonigal et al (US 5,196,485) in view of Murao et al (US 4,826,907).

As to claims 8, 9, 11, 12, 15, Dattilo discloses a method of coating shaped metal components (See column 2, lines 63-67; column 3, lines 1-4) to provide protection from corrosion, chipping, etc. (See column 1, lines 35-28) by applying a first basecoat with 15-60 % solid content to the surface and then applying a second basecoat (further coating composition) to the surface provided with the first basecoat (See column 2, lines 1-4), the first basecoat being waterborne compositions such as suitable acrylics comprising copolymers of acrylic, methacrylic acids and alkyl esters thereof, optionally with other ethylenically unsaturated monomers (See column 4, lines 12-45). The second basecoat is applied to the first basecoat before the first basecoat is dried (See column 7, lines 53-57). The second basecoat may of any known acrylic resins (See column 4, lines 13-16, 29-43) such as those disclosed in incorporated by reference McMonigal et al, which have Tg of more than 20^0C (See column 3, lines 8-25).

However, Dattilo fails to teach that (i) the copolymers of the waterborne compositions have a glass transition temperature below $0\ ^0$C and contains from 80 to 99.5% by weight of at least one monoethylenically unsaturated, hydrophobic monomer A, from 0.5 to 10% by weight

of at least one monoethylenically unsaturated monomer B selected from monocarboxylic acids, dicarboxylic acid and their anhydrides, and if desired from 0 to 10% by weight of one or more ethylenically unsaturated monomers C, different than the monomers A and B, the weight fractions of the monomers A, B and C adding up to 100% by weight, and (ii) at least one water-soluble salt or complex salt of an at least divalent metal cation (Claim 1) such as Zn^{2+} or Ca^{2+} (Claim 2), the molar ratio of carboxyl groups of the monomers B to equivalents of the metal cation in the composition is in the range from 10:1 to 1:10 (Claim 3), the monomer A is selected from the C_1- C_{10} alkyl esters of acrylic acid, the C_1- C_{10} alkyl esters of methacrylic acid, and vinylaromatic compounds (Claim 4), the monomer B is selected from acrylic acid and methacrylic acid (Claim 5), the first basecoat, based on its overall weight, contains from 10 to 50% by weight of copolymer (Claim 6), the first basecoat per 100 parts by weight contains from 5 to 300 parts by weight of at least one inorganic filler, at least one pigment, or a mixture of at least one inorganic filler and at least one pigment as component iii) (Claim 7), the first basecoat is applied in an amount of from 50 to 500 g/m^2 (about 40-400 microns thickness), calculated as nonvolatile constituents of the composition (Claim 13), the first basecoat comprises: i) from 20 to 90% by weight of [A], ii) from 0.1 to 5% by weight of metal ions, iii) from 2 to 25% by weight of at least one pigment and/or from 10 to 60% by weight of at least one filler, the total amount of pigment+filler not exceeding an overall amount of 75% by weight, and iv) from 0.1 to 20% by weight, of customary auxiliaries (Claim 14).

Murao et al teach that a water-dispersible coating composition (See column 4, lines 35-38) of 30-70 % of solids (See column 9, lines 18-20) comprising 100 parts by weight of a copolymer resin [A] having a glass transition temperature Tg(A), determined by the DSC

method, of -10 ^{0}C to about –55 ^{0}C, prepared by emulsion copolymerization of from 95 to 99.5% by weight of at least one monomeric C_1- C_{10} alkyl ester (a) of at least one of acrylic and methacrylic acid (See column 4, lines 42-61) and 0.5 to 5% by weight of at least one alpha,beta-unsaturated carboxylic acid (b) such as acrylic and methacrylic acid (See column 4, line 67) in the presence of a nonionic surface-active agent; 20-300 parts by weight of a copolymer resin [B], about 0.2 to about 10 parts by weight per 100 parts of resins [A] and [B], as solids, of a water-soluble polyvalent metal salt [C] of an inorganic or organic acid (See column 1, lines 29-68; column 2, lines 1-2; column 9, lines 62-68), wherein a polyvalent cation is selected from Zn.sup.2+ and Ca.sup.2+ (See column 10, lines 1-18), and filler in the amount of, for example, up to about 250 parts by weight, specifically about 70 to about 250 parts by weight, per 100 parts by weight of the resin emulsions [A] and [B] combined (i.e. 84-300 parts per 100 parts of resin [A]) (See column 10, lines 46-55), and up to 20 % of customary auxiliaries (See column 11, lines 12, 24, 39, 53, 61). The dry film thickness is about 200-1200 microns (See column 12, lines 33-35). The water-dispersible coating composition, when used for coating metal parts of vehicles provides outstanding improvements in chipping resistance, adhesion to a sheet metal, corrosion resistance, flat film formability, anti noise property, gasoline resistance, cold bending resistance and impact strength, and also in the prevention of cratering or flash rusting during coating, and also in hot water resistance (See column 4, lines 24-37). In other words, a secondary reference of Murao et al is relied upon to show that a water-dispersible coating composition, which substantially identical to the composition of claims 1-7, 14, can be advantageously used for coating metal components.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have used a water-dispersible coating composition of Murao et al as a first waterborne basecoat in a method of Dattilo with the expectation of providing the desired outstanding improvements in chipping resistance, adhesion to a sheet metal, corrosion resistance, flat film formability, anti noise property, gasoline resistance, etc., as taught by Murao et al.

4. **Claims 1-10, 14, 15** are rejected under 35 U.S.C. 103(a) as being unpatentable over JP 52093122 in view of Murao et al (US 4,826,907).

As to claims 8, 9, 15, JP 52093122 discloses a method of coating a metal component 1 such as roofing material to provide protection from corrosion comprising applying a basecoat 2 of e.g. acrylic resin, granules 3 having a granular size of 0.1-2 mm over the basecoat 2 and overcoat 4 of e.g. acrylic resin over the granules (See Abstract).

JP 52093122 fails to teach that the basecoat has limitations of claims 1-7, 14.

Murao et al is applied here for the same reasons as above, i.e. a secondary reference of Murao et al is relied upon to show that a water-dispersible coating composition, which is substantially identical to the composition of claims 1-7, 14, can be advantageously used for coating metal components.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have used a water-dispersible coating composition of Murao et al as a first basecoat in a method of JP 52093122 with the expectation of providing the desired outstanding improvements in adhesion to a metal substrate, corrosion resistance, etc., as taught by Murao et al.

Conclusion

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Elena Tsoy whose telephone number is (703) 605-1171. The examiner can normally be reached on 9:00-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Shrive Beck can be reached on (703) 308-2333. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9310 for regular communications and (703) 872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.

Elena Tsoy

Elena Tsoy
Examiner
Art Unit 1762

May 29, 2003